



# CARBON CHEMISTRY

## Pesticide Remediation (Myclobutanil Focus)

### Safety

1. SDS Sheets: Available upon request on all chemicals used in this process.
2. PPE: The following should be worn by all lab personnel Ethanol extraction:
  - a. Splash goggle
  - b. Lab coat
  - c. Gloves

### Preparation and Use

- a. Distilled cannabis oil will be mixed with Heptane, washed with pH adjusted saline, then passed over a MagSil-PR column.
  - i. **Concentration-** Use full concentration of:
    - Heptane
    - 99% USP Isopropyl Alcohol
    - MagSil-PR T-41
  - ii. **Quantity-** 2 parts heptane to 1 part distilled cannabis oil 1 part heptane to 1 part MagSil PR T-41 according to directions 2 parts MagSil PR to 1 part distilled cannabis oil 1 part isopropanol to 1 part MagSil PR
  - iii. **Frequency-** An initial volume of distilled oil is used. An initial volume of Heptane is used, more is added to flush the column. Isopropanol is used to flush the column.
  - iv. **Location-** Distillation of crude oil occurs in the short path still

### Procedure

1. Dissolve first pass distillate in Heptane (2:1, Heptane:Distillate)
2. Add solution to reactor
3. Prepare 60 parts saline (1-5% Salt to distilled water)
4. Separate saline into 3 equal volumes
5. Use citric acid to bring the pH of one volume of saline to pH 4
6. Use sodium bicarbonate to bring the pH of one volume of saline to pH 8
7. Add pH 4 saline to reactor
8. Mix for 10 minutes

9. Drain saline
10. Repeat steps 7-9 with pH 8 saline
11. Repeat steps 7-9 with remaining neutral pH saline
12. Add T-41 per label instructions, to the solution in reactor, mix per label instructions
13. Wet load MagSil in chromatography column
14. Drain solution from reactor to top of chromatography column, collect all fractions together
15. Before column runs dry, flush volume of clean Heptane through column
16. Before column runs dry, swap collection vessel and flush volume of clean Isopropanol
17. Rotovap Heptane solution (See Solvent Recovery SOP)
18. Second pass SPD (See Second Pass SPD SOP)

#### **T-41 Bleaching Method**

- Heat Oil to 90°C
- Add 3-5% T-41
- Mix for 20-30 minutes
- Cool to 40-45°C
- Add carrier solvent (ethanol/heptane)
- Filter through vacuum or pressure filtration